

**TAG: Learning Set 2 Intro &
2.1 Understand the Challenge**

Name _____

Hour _____ Date _____

Propeller-Car Challenge

Read p. 91.

What is the goal of Learning Set 2?



2.1 Understand the Challenge

Read p. 92 and the top of p. 93.

List your ideas about different vehicles you know and how the vehicles move:

Put the vehicles into different categories:



Communicate

Follow your teacher's directions to share your ideas.

Read **Forces, Energy, and Work** on pp. 94-95.

When is work done?



When is energy transferred?

What is the difference between kinetic and potential energy?

What two things does kinetic energy of an object depend on?

What are the three types of potential energy? Give an example of each.

1.

2.

3.

Describe how your coaster car's gravitational potential energy became kinetic energy. (You may include a diagram if you want.)



Reflect

1. Suppose your car is at rest on a flat surface. What factors increase the amount of force needed to get the car to move? What factors decrease the amount of force needed to get the car to move?

2. What do you need to learn more about to help make your car move and to remain in motion so that it travels a long distance over a surface?

Identify Criteria and Constraints

Read the paragraph in the middle of p. 96.

Identify the criteria and constraints for your car in the chart:

Criteria	Constraints